



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506 - (217) 782-2113

DOUGLAS P. SCOTT, DIRECTOR

217/782-2113

CONSTRUCTION PERMIT -- NSPS SOURCE

PERMITTEE

U.S. Department of Energy
Attn: Dr. Joanna M. Livengood
Wilson and Kirk Roads, P.O. Box 2000
Batavia, Illinois 60510

Application No.: 09050013

I.D. No.: 043807AAI

Applicant's Designation:

Date Received: May 8, 2009

Subject: Cavity Processing Facility and Boiler Replacement

Date Issued: September 22, 2009

Location: Wilson and Kirk Roads, Batavia, Kane County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of:

One 11.55 mmBtu/hour Natural Gas-Fired Boiler
One Cavity Processing Facility Which Includes:
One Buffered Chemical Polishing (BCP) Process
One Electropolishing (EP) Process

as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit is issued based on the potential to emit (PTE) for hazardous air pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act being less than 10 tons per year of any single HAP and 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program permit from the Illinois EPA.
- 2a. The 11.55 mmBtu/hr boiler is subject to the New Source Performance Standard (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR Part 60 Subparts A and Dc. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The Permittee shall perform the applicable monitoring, reporting and recordkeeping as required by 40 CFR 60.47c and 60.48c.
- c. At all times the Permittee shall, to the extent practicable, maintain and operate the boilers, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
3. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 10 mmBtu/hour to exceed 200 ppm, corrected to 50 percent excess air.

4. Operation and emissions of the Cavity Processing Facility shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions</u>		
	<u>(Lbs/Hour)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
Nitrogen Oxides (NO _x)	0.13	0.06	0.58
Particulate Matter (PM)	0.02	0.004	0.042

These limits are based on a maximum of 2,000 hours/year operation of the BCP process and a maximum 5,000 hours/year operation of the EP process and the information provided in the application.

- 5a. Total natural gas combustion emissions and operation of the 11.55 mmBtu/hr natural gas-fired boiler shall not exceed the following limits:

Natural Gas Usage: 10.0 mmscf/month, 99.25 mmscf/year

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
	<u>(Lbs/mmscf)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	32*	0.16	1.59
Carbon Monoxide (CO)	84	0.417	4.17
Sulfur Dioxide (SO ₂)	0.6	0.003	0.03
Particulate Matter (PM)	7.6	0.038	0.38
Volatile Organic Materials (VOM)	5.5	0.027	0.27

These limits are based on the 99.25 mmscf of natural gas usage, 8760 hours of operation, the emission factors for natural gas combustion as listed in Section 1.4 of the AP42(Fifth edition, Supplement D, July 1998) Table 1.4-1, and information in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

* The emission factor for flue gas recirculation is used. This boiler is equipped with flue gas recirculation.

- b. Natural gas shall be the only fuel fired in the boiler.
6. The Permittee shall maintain monthly records of the following items:
- Natural gas usage (mmscf/month and mmscf/year);
 - The hours of operation of the EP process and the BCP process (hours/month and hours/year);
 - Quantity and concentration of nitric acid used (gallons/month and gallons/year; percent); and
 - NO_x, CO, SO₂, PM, VOM, and HAP emissions with supporting calculations (tons/month and tons/year).
7. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying

by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

8. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

9. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

The operation of this equipment is addressed in Operating Permit No. 79070012.

If you have any questions on this permit, please call Bruce Beazly at 217/782-2113.

Edwin C. Bakowski

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Issued:

9-22-2009

ECB:BDB:psj

cc: Region 1



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
 - a. to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
 - b. to have access to and to copy any records required to be kept under the terms and conditions of this permit,
 - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
 - d. to obtain and remove samples of any discharge or emissions of pollutants, and
 - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
 - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
- b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
- a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
 - b. upon finding that any standard or special conditions have been violated, or
 - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

DIRECTORY
ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR

For assistance in preparing a permit application contact the Permit Section.

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
1021 N. Grand Ave E.
P.O. Box 19506
Springfield, Illinois 62794-9506

or a regional office of the Field Operations Section. The regional offices and their areas of responsibility are shown on the map. The addresses and telephone numbers of the regional offices are as follows:

Illinois EPA
Region 1
Bureau of air, FOS
9511 West Harrison
Des Plaines, Illinois 60016
847/294-4000

Illinois EPA
Region 2
5415 North University
Peoria, Illinois 61614
309/693-5463

Illinois EPA
Region 3
2009 Mall Street
Collinsville, Illinois 62234
618/346-5120



